

ABSTRACT OF THE DISCLOSURE

A light source 10 is connected sequentially through a single mode optical fiber and a coupler to one end of a polarization maintaining optical fiber, the other end of which is connected to an optical waveguide of an optical integrated circuit having a branching optical waveguide which has a polarizing function with the polarization axis of the optical fiber being coincident with the direction of the TE mode in the optical waveguide. One end of each of polarization maintaining optical fibers are connected to two other ends of the optical waveguide with the polarization axis of the optical fibers being coincident with the direction of the TE mode in the optical waveguide. The other ends of the optical fibers are connected to one end of each of polarization maintaining optical fibers with their polarization axis displaced by an angle of 45° from each other. The other ends of the optical fibers are connected to the opposite ends of a single mode fiber optic coil.